

ONLINE GRADUATE STUDENT PERCEPTIONS OF PROGRAM COMMUNITY

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ABSTRACT

This study investigates online graduate student perceptions of program community (i.e., feelings of trust, connection, and affiliation among students, faculty, and staff that develop and exist outside individual courses). Eighty-four graduate students in one certificate and two degree programs completed a researcher-developed survey distributed through email. The results indicated that students had a modest interest in program community, took pride in program affiliation, and incorporated affiliation as part of their personal identities. Students were interested in their peers' and professors' professional interests and felt comfortable contacting faculty members when not enrolled in their courses. The results are discussed in the context of the literature.

Keywords: online programs; graduate students; higher education; community; program community; affiliation

INTRODUCTION

Online learning is an established part of higher education (Allen & Seaman, 2016; O' Shea, Stone, & Delahunty, 2015). As more institutions turn to online delivery for courses and degree programs, the research suggests that achievement scores are similar to face-to-face courses (Johnson, Aragon, Shaik, & Palma-Rivas, 2000; Summers, Waigandt, & Whittaker, 2005). Although feelings of isolation and distance, possibilities for miscommunication, and tendencies for increased attrition have negatively influenced online courses over the past three decades, best practices exist to reduce or eliminate them from modern online courses with or without synchronous components (Gaytan, 2013; Lee & Choi, 2011; Palloff & Pratt, 2007). As instructors actively participate in course activities, provide timely feedback, encourage and foster communication, help students realize they share similar interests, and develop an atmosphere of trust, learners feel connected to each other and gain a sense of community (Glazer, Breslin, & Wanstreet, 2013; Rovai, 2001; Thormann & Fidalgo, 2014). The Community of Inquiry

framework suggests that distance learning is facilitated through cognitive, teacher, and social presence (Garrison, Anderson, & Archer, 1999; Tolu & Evans, 2013). As instructors design and manage learning (teacher presence) that facilitates inquiry through sustained interaction and dialogue (cognitive presence), learners become comfortable with each other, present themselves more holistically (social presence), and further sustain dialogue and interaction in the managed space (Garrison et al., 1999; Zhan & Mei, 2013). Although the parameters associated with establishing community have the potential to transcend course boundaries, most practices focus on course-specific activities (Exter, Korkmaz, Harlin, & Bichelmeyer, 2009; Glazer et al., 2013; O' Shea et al., 2015; Thormann & Fidalgo, 2014). This course-specific focus is problematic because it ignores the myriad factors outside course settings deemed important for success (Lee & Choi, 2011; Tinto, 2006, 2012; Yao, Wilson, Garcia, DeFrain, & Cano, 2017). Thus, discussions of online community formation largely focus on course activities that decay as courses conclude and must be renewed each semester

(Exter et al., 2009; Jiang, 2016; Quirk & Young, 2016; Tolu & Evans, 2013; Zhan & Mei, 2013). Indeed, the research is limited regarding practices at the program, college, and institutional level that support community formation and learners' perceptions of these practices. The purpose of this study is to examine student perceptions regarding community formation that extend beyond course boundaries within online graduate programs. Research questions guiding this study included:

1. How important is program community to online graduate students?
2. What are student perceptions of program community?
3. What should programs provide to promote program community?
4. How are perceptions influenced by individual characteristics?

LITERATURE REVIEW

Collegiate Success

Institutions of higher education use various measures to determine student success. Some focus on earned credits and course grades (Kuh, Zinzie, Buckley, Bridges, & Hayek, 2006), which others focus on retention to the sophomore year, the percent that graduate or transfer within a certain amount of time, postgraduation conditions—including employment attainment—and student satisfaction (Kuh et al., 2006; Tinto, 2006). For purposes of this study, student success focuses on the ability of students to graduate from their degree programs.

Myriad factors influence student success in college and university settings. Differences in study habits, social skills, work ethic, high school grade point average, college readiness, professional goal setting, financial security, dependent care, family support, and other variables all contribute to whether a student will earn a degree (Kuh et al., 2006; Lee & Choi, 2011; Lee, Donlan, & Brown, 2010). While personal characteristics influence success, services provided by institutions of higher education, degree programs, and faculty members also contribute significantly. Tinto (2006, 2012) stated that faculty members play a key role in retention because they become the face of the university for most students and their courses act as a tangible measure towards degree completion. Thus, students need clearly stated expectations, support, feedback, and other resources from faculty members to progress

towards graduation (Shackelford & Maxwell, 2012; Thormann & Fidalgo, 2014; Tinto, 2012). Yet, programs and institutions also provide vital services that promote affiliation and success among residential students (Glazer et al., 2013; Lee & Choi, 2011; Yao et al., 2017).

To help students integrate socially into college and university life, various socials, performances, intermural sports, clubs, collegiate athletics, and other activities are provided. Institutions also provide employment and career services, academic advising, writing centers, legal aid, mental health counseling, daycare, and other services to promote graduation and job attainment. Even campus grounds are designed and manicured to provide a sense of prestige and membership (Nathan, 2005). Orientations, advising sessions, research groups, parties, socials, and student organizations provide opportunities for program faculty, students, and alumni to communicate and come together. Formal meetings are often complemented by informal gatherings, hallway conversations, lunches, and so forth.

Service Benefits

The benefits of these services are many. Orientations, clubs, socials, and other formal and informal events help students recognize shared interests with others. Interaction with faculty, staff, and peers establishes trust and promotes feelings of belonging and membership (Kuh, 2003; McMillan & Chavis, 1986; Oldenburg, 1989). These feelings are further solidified through institutional support services that help learners to reach their educational goals, obtain guidance and support, and realize they are not alone in their higher education pursuits (Gaytan, 2013; Pike, Kuh, McCormick, Ethington, & Smart, 2011). These supports foster affiliation, and students become a part of the institution. School teams become student teams. School successes become student successes, even beyond graduation. Institutions of higher education invest heavily in students in part so that former students will give back to the institution and future generations of students. Thus, a professional network is born with connections that span generations of learners in various professional fields. A degree symbolizes membership in a vast professional network. It may open doors to business associates, professional advice, and other services in ways that are difficult to replicate with other credentialing systems.

However, the focus on these services and their value for institutions is largely based on research done in traditional, residential settings (Tinto, 2006).

Online Activities

The rise of the Internet, coupled with dropping costs of computer technologies, enabled online learning (where 80% or more of instruction occurs through online tools) to become a staple in higher education (Allen & Seaman, 2016; O' Shea et al., 2015). Online learning expands the potential student pool, reduces physical costs associated with instructional delivery, provides greater flexibility in course scheduling, and allows institutions to partner with other learning enterprises to deliver instruction (Lee & Choi, 2011; Shea & Bidjerano, 2014; Truluck, 2007). In 2014, over one-quarter of all university students in the United States enrolled in one or more online course (Allen & Seaman, 2016). However, online courses have also been associated with challenges regarding student isolation, miscommunication, and increased attrition (Boston, Ice, & Burgess, 2012; Gaytan, 2013; Lee & Choi, 2011). Various solutions have been proposed to combat these problems, which include increasing instructor and student presence, establishing clear expectations, providing timely feedback, and increasing student interaction (Kang & Gyorke, 2008; Quirk & Young, 2016; Shackelford & Maxwell, 2012). Another strategy is community development among online learners (Glazer et al., 2013; Yao et al., 2017).

Establishing a sense of community is a multifaceted process that begins by interacting with others through shared experiences and interests (Glazer & Wanstreet, 2011; Rovai, 2001). As online interaction occurs, a sense of trust is established among students, faculty, and staff. Increased trust leads to increased interaction and learning, which leads to feelings of connectedness, belonging, membership, and interdependence (Glazer et al., 2013; Rovai, 2001; Thormann & Fidalgo, 2014). These feelings of membership represent the initial conditions associated with affiliation that institutions hope students and alumni will retain for a lifetime. Garrison et al. (1999) labeled this sense of trust as "social presence" or the ability for learners to present themselves socially and emotionally as a real people (p. 132). Yet, social presence does not occur naturally in online settings (Zhan & Mei, 2013). Nor may it transfer between

courses, the main focus of community discourse (e.g., Rovai, 2001; Shackelford & Maxwell, 2012; Zhan & Mei, 2013). The distance that separates students from each other and their institutions of higher education may also separate them from sustained feelings of interaction and affiliation.

Online Affiliation

Exter et al. (2009) found that online graduate students often lacked opportunities to interact with faculty outside of course settings. Some wondered whether full-time professors would remember who they were. O' Shea et al. (2015), and Quirk and Young (2016) mentioned similar challenges among students. Learners lacked spaces where they could communicate with each other outside course settings. In a survey of 395 online students, Glazer and Wanstreet (2011) found that student relationships did not develop outside class settings. Because all community models focus on sustained interaction between faculty members and students, limited opportunities to interact outside of regularly scheduled class times is problematic. Indeed, limited opportunities to develop relationships led participants to suggest that social network sites, social events, and teleconference sessions should be used to promote feelings of community (Exter et al., 2009; Quirk & Young, 2016). However, other students indicated that they lacked the time or the interest to participate in community-building activities (Exter et al., 2009; O' Shea et al., 2015). Although the effects of interaction on perceptions of affiliation was not measured in most studies, O' Shea et al. (2015) and Glazer and Wanstreet (2011, p. 60) each found that 40% of online students "felt no connection to their school or university." Other participants felt like they were treated worse than face-to-face students (O' Shea et al., 2015). Given these findings about course community and the lack of literature associated with program community, this study examined student attitudes towards community formation that extended beyond course boundaries.

METHODS

Sample and Participants

The study was conducted at a rural, land-grant, research university in the western United States with a student enrollment of over 12,000. After obtaining Institutional Review Board approval, researchers invited 244 online graduate

students from one certificate and two degree programs in adult and postsecondary education and instructional technology to participate in the study. The researchers selected these graduate programs because they were delivered entirely online and asynchronously.

Interested students could follow a link (included in the invitation) to the online survey. By submitting the survey, participants provided consent for participation. A total of 88 students completed the survey (a 36% response rate).

Demographics. Most respondents were female (69.5%), though 6.1% preferred not to reveal their gender. Ages ranged from 23 to 69 ($M = 41.0$). Thirty-eight percent were enrolled in an instructional technology program and 32.1% in an adult and postsecondary program. Almost a third (28.2%) were graduate students in other programs, and 1.3% had not been admitted to an academic degree program. Only 4.8% of participants pursued a graduate certificate. Most students were master's students (45.0%); others were enrolled in EdD (30.0%) and PhD (22.5%) programs. Respondents had spent 0 to 11 years ($M = 3.34$) in their programs; however, 55.9% were in their first, second, or third year of studies.

Instruments

After a thorough literature review regarding online course and program community, researchers developed a 35-question, online survey that measured participants' perceptions of program community, participation in program community activities, and connection to current students, faculty, and alumni. Twenty-seven questions included Likert-type responses on a five-point scale from 1 (strongly disagree) to 5 (strongly agree). Four items were reverse keyed. In two open-ended questions, participants described what their program did to promote community beyond individual courses and what they would like their program to do. Finally, participants indicated their age, gender, online degree program, degree type, and admission year in six demographic questions.

Following data collection, a reliability analysis was performed on the instrument and its two subscales. The internal reliability coefficient for the scale ($\alpha = 0.84$) was acceptable, and Cronbach's alphas for the importance ($\alpha = 0.84$) and perceptions subscales ($\alpha = 0.77$) were also acceptable.

Procedures and Analysis

Potential participants were invited by email near the end of Spring semester, 2016. Invitations asked graduate students to follow a hyperlink to a formal, written introduction and survey. Following the initial invitation, reminder emails were posted on weekly intervals for three weeks along with a brief thank you message for students who had previously completed the survey. Participants were able to register for the drawing of two \$20 Amazon gift cards.

Four cases had 1/3 or more data missing and were removed. Frequencies were generated before four negatively written Likert-type questions were reverse coded. Descriptive statistics were then calculated. Independent sample *t* tests were used to evaluate respondent perceptions based on gender and academic degree. Researchers also conducted two-way contingency table analyses to evaluate response differences based on degree programs. A one-way analysis of variance was conducted to evaluate time spent in academic programs and survey responses. Finally, open-ended questions were analyzed for common themes using principles of open-coding, frequency count, and constant comparison (Creswell, 2012; Patton, 2002).

RESULTS

Q1: How important is program community to online graduate students?

Participants moderately valued program community ($M = 3.71$; $SD = 0.53$). They believed that professional connections with peers and faculty members were important, and they took pride in being a member of their academic programs. Most respondents agreed or strongly agreed with 11 of 16 items on the importance subscale. Most agreed or strongly agreed that faculty professional pursuits were interesting (95.2%), they experienced pride in graduate program membership (90.5%), faculty professional connections were important (89.3%), student professional pursuits were interesting (86.9%), and professional student connections were important (79.7%). Five items had a mean of 4.00 or above; item 13 had the highest mean ($M = 4.42$, see Table 1). Additionally, over 60% agreed or strongly agreed that informal faculty communication was important and professional networks included program students (67.9%); interacting with faculty outside of class was important and graduate

Table 1. Means and Standard Deviations for Importance Items

Items	<i>M</i>	<i>SD</i>
1. Program community is not important to me. [R]	3.63	1.13
2. It is important for me to interact with students in my program outside of classroom settings.	3.13	1.13
3. It is important for me to interact with faculty members in my program outside of classroom settings.	3.66	1.07
4. I take pride in knowing that I am a member of my graduate program.	4.38	0.85
5. Membership in my graduate program is a part of my identity.	3.75	0.96
6. I am interested in what students in my program do socially.	2.89	0.98
7. I am interested in what faculty members in my program do socially.	2.95	1.01
8. Informal communication with students in my program is important to me.	3.54	1.02
9. Informal communication with faculty members in my program is important to me.	3.71	0.90
10. Professional connections with students in my program are important to me.	4.10	0.82
11. Professional connections with faculty in my program are important to me.	4.38	0.74
12. I am interested in what students from my program do professionally.	4.12	0.71
13. I am interested in what faculty members in my program do professionally.	4.42	0.63
14. My professional network includes students from my program.	3.67	0.98
15. My professional network includes faculty members from my program.	3.66	1.09
16. My program does not need to be a part of my professional network. [R]	3.76	0.90

program membership was part of their identity (66.6%); and professional networks included program faculty (65.5%).

More than 60% of participants disagreed or strongly disagreed with two negative items: my program does not need to be a part of my professional network (66.7%), and program community is not important (64.3%). Students were much less interested in what others did socially. Only 33.3% of participants were interested in what students did socially and 38.1% were interested in what

faculty members did socially. These two items had the only mean scores below 3.00 in this subscale.

Q2: What are student perceptions of program community?

Students did not perceive a high level of community in their programs ($M = 3.10$; $SD = 0.62$). None of the 11 items on the perception subscale had a mean at or above 4.00. Most students (77.4%) were comfortable with contacting program faculty members when they were not taking courses those faculty members taught. This statement, item 19, had the highest mean ($M = 3.82$) on the subscale (Table 2). Participants agreed or strongly agreed that they could easily access faculty outside course settings (70.2%) and student interactions strengthened program community feelings (69.1%). Item 17, a negative item, had the lowest mean score ($M = 2.37$); 66.7% of respondents agreed or strongly agreed that they felt disconnected from peers when they were not enrolled in the same courses.

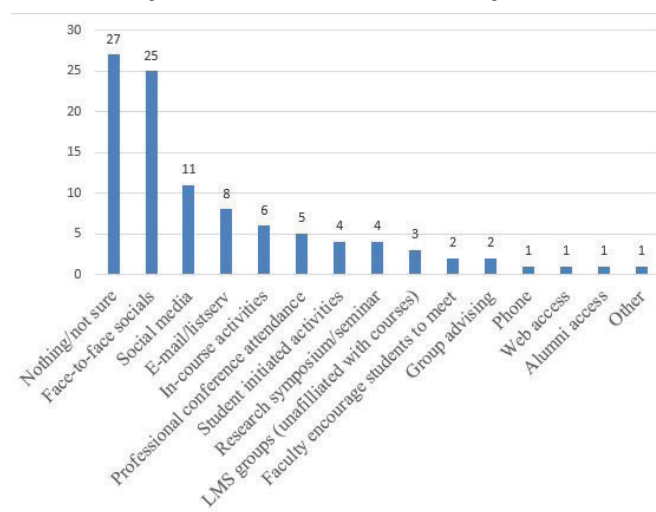
Table 2. Means and Standard Deviations for Perceptions of Program Community Items

Items	<i>M</i>	<i>SD</i>
17. I feel disconnected from students in my program when we are not taking courses together. [R]	2.37	1.04
18. I am comfortable contacting students in my program when we are not taking courses together.	3.21	0.97
19. I am comfortable contacting faculty members in my program when I am not enrolled in their courses.	3.82	0.98
20. I know alumni from my program.	3.10	1.34
21. I interact with alumni from my program.	2.84	1.27
22. I can easily access students from my program outside of course settings.	2.74	1.16
23. I can easily access faculty members from my program outside of course settings.	3.71	1.04
24. Activities (e.g., doctoral retreats, cross-course interactions, group advising, webinars, Twitter chats) help me feel like a part of a program community.	3.46	1.09
25. Activities help me interact with students when they are not taking courses with me.	3.19	1.09
26. Interacting with students in my courses has strengthened feelings of program community.	3.76	0.85
27. My program does little to promote program community. [R]	3.05	1.11

Current Program Community Supports

One open-ended question asked participants about current community supports. Seventy participants made 116 comments regarding program activities to promote community beyond individual courses (see Figure 1).

Figure 1. Current Activities to Promote Program



Twenty-seven participants indicated their program did nothing or they were unsure what their program did to promote community. One participant wrote:

From my perspective and experience, nothing. I have been to campus twice: once for my Capstone presentation (MS) and once for EdD orientation. As someone who has done ALL their EdD courses out of state, I feel little to no connection to the students, professors, college, or university. No effort has been made (outside of [the university student association] blast emails) to be included.

Orientations and retreats. Yet, 25 students indicated face-to-face orientations, retreats, and socials helped them to affiliate with their program. Participants indicated that “spring potlucks,” program research symposia, interactions with faculty at national and regional conferences, “doctoral residency retreats,” “picnic-like event[s],” and “on-campus activities” helped them feel a sense of program community. One participant wrote, “I do think that the program should continue the entry doctoral retreat. This retreat really helped me to feel part of the university—I even bought a t-shirt in the gift shop which I wear often!”

Internet technologies. Because many students were physically distant from campus, they

indicated that internet technologies helped them feel connected to their program. Eleven participants indicated that social media promoted program community. Eight others mentioned the use of email and listservs. Typical comments included, “My cohort has a Facebook group page where we can share ideas and stay in touch,” and “It was nice to be able to look back at the social networking sites we were required to use so that I could look someone up if I needed to.”

Student-driven community building. Faculty also encouraged students to seek community building activities on their own. One participant wrote:

Usually in the beginning of the course, during the introduction activity/discussion, the teacher encourages the class to use each other as resources outside of class. The introduction posts also give students a chance to learn about the interests of their peers. I have read how some students have connected more socially outside of the program.

Three students described some of these student-led activities, stating they shared contact information with others, met at restaurants to celebrate program milestones, and “bonded” with “fellow students from [their] job.” In these instances, students took the initiative to reach out to others for support and encouragement, thereby instilling a deeper sense of community.

Course activities. However, six students continued to focus on course-based activities, including “group projects,” LMS profile updates, “discussion threads” posts, and “personal introductions” to promote community. One student wrote, “Since my program largely consists of distance Ed students, professors seemed very conscientious about giving us time to interact during scheduled class time, as well as assigning group projects to foster community outside of class hours.” Another wrote, “Other than group projects, I don’t feel that there is anything that is done to promote community outside of courses.”

Challenges

Although asked to describe supports, 15 participants mentioned challenges in building and sustaining program community. These included lack of alumni interaction, few opportunities to interact socially with faculty and students, limited time, and intimidating faculty. While one participant enjoyed annual campus retreats, he stated, “I appreciate these, but would like more of an opportunity to

just visit with peers and faculty—maybe a meal together or some type of social opportunity.” Three others mentioned lack of time or commitment as a deterrent to community building. One wrote, “I enjoyed the entry doctoral retreat. There seems to be other opportunities, but I don’t take advantage of these due to time restrictions.” Two students wrote about how professor demeanors deterred feelings of community. One mentioned, “I wish more was [done] outside the classroom as many of my instructors are intimidating; but if I was given the opportunity to meet [them] socially, this might subside my fears.”

Q3: What should programs provide to promote program community?

One open-ended question asked participants what community supports they desired. Sixty-three participants made 86 statements answering this question.

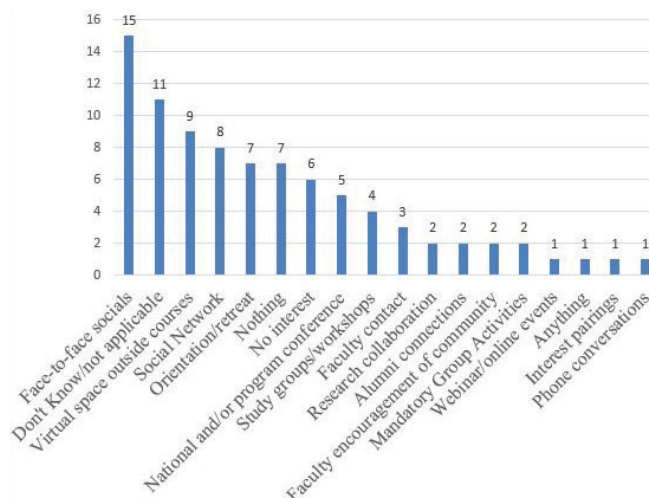
Uncertainty or nothing. Eleven participants wrote that they were unsure what community supports were needed. Three others stated they were too busy to participate in community building activities and six mentioned that they were uninterested. One wrote:

It’s tough to develop community at a distance—I’m 300 miles away from most of my cohort. I have a professional community at the school where I teach, so fostering a community with my master’s cohort has not been as important to me.

Another mentioned, “Living on the other side of the country, I feel more connected with the University as a whole than [with] individuals who are in my program. I do not feel a strong need for a community program.” However, seven participants were satisfied with program community efforts and indicated that no additional actions were necessary. Typical comments included, “what they do is sufficient” and “I feel that the opportunities are there for students who wish to take part in them.”

Face-to-face events. Despite these responses, most participants desired additional supports (see Figure 2). Fifteen desired more face-to-face socials. Several wrote comments like “wine and cheese parties,” “annual gatherings,” “social evening,” “family-friendly and free events,” and “more in-person activities.” Seven others desired face-to-face orientations and retreats. Two participants indicated their program provided an annual retreat but wanted them “more than once a year.”

Figure 2: Recommendations to Promote Program Community



Yet, problems with physical separation were also noted. One participant stated, “This is [a] difficult question since so many of us are off campus. Perhaps getting a social gathering together once a semester—like a potluck dinner or picnic at a local park—would be an option.”

Additional distance tools. Based on the online nature of the degree programs, several students desired supports from distance tools. Nine students desired spaces where they could exchange ideas outside of class (e.g., “study groups,” “workshops,” faculty collaboration, research presentations, and publications). Typical comments included, “make a space available for us to meet or discuss noncourse topics” and “Perhaps start a café area online where questions and answers can be exchanged concerning the program and the classes within it.” Eight others suggested using social media tools to foster these conversations. Two participants mentioned increasing alumni relations. One wrote:

Updates on what previous graduates are doing would be excellent: published writings, career choices—maybe some type of on-line newsletter—nothing too long but something that celebrated accomplishments and provided suggestion[s] for student who are still in the trenches!

Q4: How are perceptions influenced by individual characteristics?

Gender. Researchers conducted independent samples t tests to evaluate differences based on gender. The test was significant for three statements on the instrument: item 8, informal student communication is important, $t(74) = 2.54$, $p = 0.01$;

item 15, my professional network includes program faculty, $t(75) = -2.61$, $p = 0.01$; and item 19, I am comfortable contacting faculty when not enrolled in their courses $t(59) = -4.42$, $p = 0.00$. Women ($M = 3.67$, $SD = 0.97$) valued informal communication with other students more than men. Yet, men ($M = 4.15$, $SD = 0.88$; $M = 4.45$, $SD = 0.51$) had higher mean scores than women ($M = 3.51$, $SD = 1.12$; $M = 3.72$, $SD = 0.90$) for items 15 and 19. Men were more likely to agree that their professional networks included faculty members. Men were also more comfortable contacting program faculty when not enrolled in their courses.

Academic degree. EdD and PhD students were combined into one group (doctoral students) to evaluate differences between students in master's and doctoral degree programs. Only one item resulted in a significant mean score difference through independent samples t tests: item 9, informal faculty communication is important, $t(67) = -2.79$, $p = 0.01$. Doctoral students ($M = 3.95$, $SD = 0.80$) felt it was more important to have informal communication with program area instructors than master's students ($M = 3.39$, $SD = 0.96$).

Two-way contingency table analyses were conducted to evaluate whether students in the MS, EdD, and PhD degree programs responded differently to instrument items. Significant differences occurred in five items: 14, my network includes program students, Pearson $\chi^2(6, N = 77) = 14.94$, $p = 0.021$, Cramér's $V = 0.31$; 22, I can easily access students outside courses, Pearson $\chi^2(8, N = 75) = 20.29$, $p = 0.009$, Cramér's $V = 0.23$; 25, activities help me interact with students not taking courses with me, Pearson $\chi^2(8, N = 70) = 16.51$, $p = 0.036$, Cramér's $V = 0.34$; and 26, interacting with students in courses strengthened program community, Pearson $\chi^2(6, N = 76) = 16.34$, $p = 0.012$, Cramér's $V = 0.33$.

Follow-up pairwise comparisons were conducted for items 14, 22, 25, and 26 to evaluate differences among these proportions. Tables 3, 4, and 5 show the results. The Holm's sequential Bonferroni method was used to control for Type I errors at the .05 level across all three comparisons. Pairwise differences were significant for items 14, 22, and 26. PhD students agreed more strongly than EdD students that their professional network included students from their program (item 14). PhD students also agreed more strongly than

Table 3. Pairwise Comparison Results for Item 14 Using Holm's Sequential Bonferroni Method

Comparison	Pearson chi-square	p value (Alpha)	Cramér's V
EdD vs. PhD	13.15*	0.004 (.017)	0.56
MS vs. PhD	8.57	0.036 (.025)	0.40
MS vs. EdD	1.77	0.622 (.050)	0.17

* p value \leq alpha

EdD and MS students that they can easily contact program students outside of courses (item 22). EdD students agreed more strongly than MS students that interacting with peers in courses strengthened feelings of program community (item 26).

Time in program. Individuals indicated their program admission year during survey completion. This information was categorized into three groups: 0 to 1, 2 to 3, and 4 or more years in the program. Researchers used a one-way analysis of variance to evaluate students' time in their programs with survey responses. Results were significant for item 20, I know program alumni, $F(2, 69) = 3.70$, $p = 0.03$. Follow-up tests using Dunnett's C indicated that there was a significant difference in the first and second groups but no significant difference between other groups. Students who had been admitted to their programs 2–3 years ago were more likely to agree that they knew alumni ($M = 3.61$) than students in their first year ($M = 2.61$).

DISCUSSION AND CONCLUSION

Our findings suggest that online graduate students had moderate interest in program community. Only six participants mentioned that they were uninterested in fostering community beyond course boundaries, citing physical distance between students and faculty as the primary concern. Many participants appreciated face-to-face meetings, social media tools, communication approaches, research symposia, and other techniques used to promote community. However, consistent with Quirk and Young (2016) and Exter et al. (2009), participants wanted more services, including spaces to congregate and communicate outside of class settings and more social media use. To compensate for the lack of desired services, a few students established them on their own initiative (e.g., periodically meeting with others who lived in close proximity or sharing meals after orientations and defenses). These activities

align with findings by O' Shea et al. (2015) who reported that students established Facebook sites to interact with peers outside of class settings to promote community development.

Interestingly, 25 participants indicated that face-to-face meetings were the most effective tool to promote community in their online degree programs. They desired face-to-face socials, orientations, and retreats. These findings appear to be at odds with those of (Bolliger, Shepherd, & Bryant, 2019) who found that faculty were reluctant to provide these activities because of limited student turnout during past offerings. Indeed, faculty members often cited concerns with time commitments and physical distance as the primary reason students and faculty failed to attend, which is consistent with findings by Exter et al. (2009). Although time and distance concerns were mentioned by a few participants in this study, they were largely absent. However, posed survey questions did not directly ask participants about possible interferences with program community. Additionally, student mentions of desired services may not equate with their actual use. Although participants desired several events and tools to promote community, it is unclear whether they would regularly use them, particularly when the novelty of a new activity wears off. More research is needed regarding service uses and their effects on program community development and maintenance.

Program Affiliation

Although participants were not directly asked if they felt affiliation to their university, respondents overwhelmingly agreed that they took pride in being a part of their online graduate program. They also moderately agreed that their graduate program became part of their identity. These conditions seem to counter findings by Glazer and Wanstreet (2011) and O' Shea et al. (2015) who stated that 40% of respondents did not feel any connection with their college or university. Rather, students indicated that informal communication with other students and faculty was important, they were interested in what others were doing professionally, and they wanted to strengthen professional connections. However, despite requesting more face-to-face social events, participants indicated that they were uninterested in what others did socially. Thus, social events might act as ice-

breakers for professional conversations in face-to-face environments, which might increase student and faculty interaction, promote connectedness and trust, and nurture collaboration, membership, and belonging (Glazer et al., 2013; Rovai, 2001; Thormann & Fidalgo, 2014).

Faculty Contact

Similar to Yao et al. (2017), Thormann and Fidalgo (2014), and O' Shea et al. (2015), participants stated that faculty feedback and participation was necessary to establish community. However, unlike findings by Exter et al. (2009), participants in this study felt comfortable contacting faculty when not enrolled in their courses. This may be attributed to the smaller size of the online graduate programs studied. With a lower faculty-to-student ratio, faculty may seem more approachable than in larger programs. The results also indicated that male students were more likely to believe they could contact program faculty than female students. Because the surveyed programs had considerably more female students (consistent with most colleges of education in the United States), it is possible that the underrepresented and small sample of male students skewed these results. However, more research is needed regarding possible gender differences associated with perceptions of program community in online settings.

Student Contact

While participants mentioned that they were comfortable contacting faculty members, the results suggested that they did not feel as comfortable connecting with students outside course settings. Participants may feel that employment responsibilities obligate faculty members to help students. This may not be the case with other students, who pay to attend courses but have no direct obligations to other students outside course activities and assignments. The results also indicated that PhD students felt more comfortable contacting students outside course settings and were more likely to include them in their professional networks. This makes sense given the context of PhD programs at the university studied because they are more likely to be on campus in fulfillment of residency requirements—though the large majority of their courses are taken online. Results further indicated that women were more likely to communicate informally with other

students. Regardless, our findings support those of Kuh (2003), Pike et al. (2011), and Yao et al. (2017), who claimed that faculty, staff, and student interactions are integral for student success because they promote feelings of belonging. Yet, it appears that activities provided outside of class settings may have only a moderate impact on securing continued student-student interactions.

Course Community

Although asked to focus on activities conducted outside course settings, several participants included course events and assignments. This inclusion of course-specific activities also occurred when faculty members were asked what they do outside of course settings to encourage and establish program community (Bolliger et al., 2019). Continued focus on course-based activities may align with Tinto (2006, 2012), who stated that courses play an integral role in student success because they represent progress towards degree completion. Particularly in online settings, students may equate their degree program with the courses required for graduation, making it difficult to separate the two when discussing community. Additionally, students may have focused on course activities because they played an integral part in student-led initiatives to sustain community (see Shackelford & Maxwell, 2012; Thormann & Fidalgo, 2014). Study groups, informal gatherings, and other events may have originated through course-based interactions. Thus, it may be difficult to establish community within an online degree program without also establishing community in course settings. This aligns with findings by Yao et al. (2017), who stressed that faculty should use their courses to promote program community resources (e.g., orientations, conference introductions, and program processes). Alternatively, participants may have focused on course activities because nothing occurred outside their courses to promote program community. Several participants stated that their program did nothing to promote community. These results are evidence as to how easily program community is overlooked or neglected in practice. More research is needed regarding potential interdependencies of course community and program community.

Alumni

The number of years that students enroll in their degree program also had minimal effect on

feelings of program community and only impacted the extent that students knew alumni from their program. It appears that those enrolled in the program for several years have few connections with alumni. Yet, few participants mentioned alumni when discussing program community. Based on our findings that students are interested in the professional activities of others, this lack of mention seems odd. It appears that a large part of professional networking that could stem from degree completion and mutual feelings of pride and identity in degree programs is being ignored. More research is needed regarding these feelings of pride and identity postgraduation, the importance to which alumni place continued community with their degree program, and whether current students value these potential connections.

Limitations

Some limitations need to be pointed out. First, the data are geographically limited because they were collected at one university. Second, the sample size was relatively small and drawn from a limited number of graduate programs. Other researchers could collect data from multiple sites and perhaps numerous, diverse graduate programs, which may result in a better representation of the population. Third, all data were self-reported because the study utilized survey research methodology.

Acknowledgements

The authors wish to thank the expert review panel. Their careful review and thoughtful comments assisted in the improvement of the questionnaire.

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